

Background

Since the mid-1900's, the fishery for largemouth bass during the spring spawning season has been open in the tidal rivers of the Chesapeake Bay. Recent research suggests that the loss of a few nests has little impact on the sustainability of southern populations. Currently, the 15 inch minimum limit during the spawning season is enforced to keep more males on their nests during the spring. Off-limits fishing areas in our mid-latitude state may also help protect against nest failure. Two such areas called sanctuaries were established seasonally (1 Mar – 15 Jun) in the Potomac River (in Chicamuxen Creek and in Nanjemoy River).

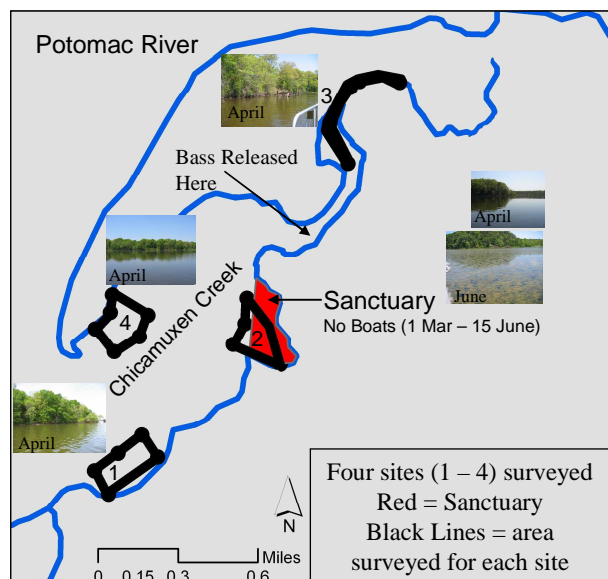


The Question

Do largemouth bass use the established Chicamuxen Creek sanctuary during the spawning season?

Methods

In December and early March, MDDNR Biologists tagged 20 largemouth bass (≥ 12 inches) from Chicamuxen Creek (most at site 3, see map below). From March – June, MDDNR Biologists weekly tracked largemouth bass at 4 sites (1 – 4). Biologists also estimated catch and reproductive status of bass at these locations once a month.



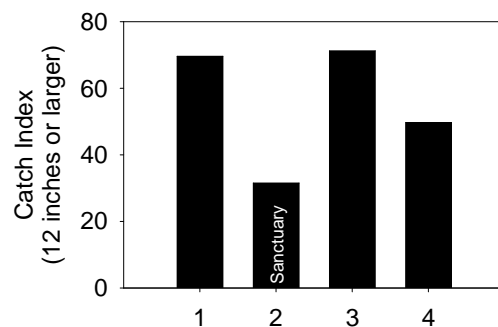
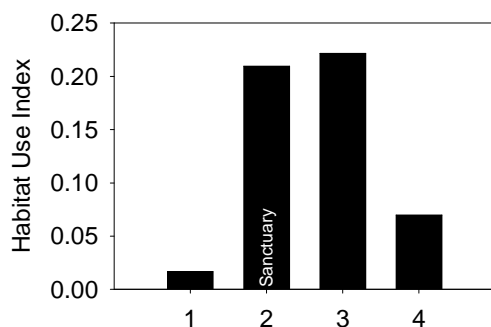
Results

Habitats among sites were similarly suitable for largemouth bass. Sites differed in: 1) distance upstream from mouth of Chicamuxen Creek; and 2) whether the habitat was a cove or not.

- 15 of 20 tagged largemouth bass were detected.
- Habitat use for tagged bass was highest in the sanctuary and site 3, which were also closest to the release site.
- The catch of bass (≥ 12 in) was lowest in the sanctuary and highest upstream in site 3.
- The highest proportion of 15 in or larger bass was caught at sites 1 (46% of all fish caught) and 4 (50% of all fish caught). Only 8% of the catch at the sanctuary was 15 in or larger.
- Bass with eggs or sperm were caught in April and May from all sites, except the sanctuary.

Discussion

The Chicamuxen sanctuary was used by a proportionally small number of bass that tended to remain in the sanctuary throughout the spawning season, but most were not 15 inches or larger. While the tags may have become detached from the fish in the sanctuary, the bass at least entered the sanctuary and used it for some period of time. Sanctuaries or Catch-and-Release areas during the spawning season could be effective at protecting nests, but such areas should be carefully chosen and evaluated periodically.



Acknowledgements

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For questions or comments: Joseph W. Love, Ph.D., Tidal Bass Manager, 580 Taylor Avenue, B-2, Annapolis, MD, 21401. Phone: (410) 260-8257. E-mail: jllove@dnr.state.md.us. Still Fishing? Visit our Website for more Info: www.dnr.state.md.us/fisheries/tidalbass.